1. Enhanced parallel image retrieval technique using relevance feedback

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Abstract: The retrieval of relevant images to a given query is a challenging problem. Many researchers have proposed solutions to solve this problem. The idea of ‘Human in Loop’ adds more useful data to the existing data, which can help refine the output of content-based image retrieval (CBIR) system. In this paper, we extend on ‘Human in Loop’ by setting up a relevance feedback system. It helps the CBIR system to understand closer similarities between images which mere feature vectors and algorithms can’t identify. This paper aims at improving the performance and efficiency of a CBIR system by using Bitmaps to show relevance among the vast number of images, for which feature vectors have already been extracted and stored, and parallel indexing and comparison process are performed to reduce computation time. Use of Bitmap helps learn the feedback obtained from multiple users regarding the relevance between various images until a saturation point is reached. The results show its superiority in comparison with existing models such as QBIC, MARS and VIPER techniques. © Springer Nature Singapore Pte Ltd. 2018. (12 refs)
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